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ABSTRACT

This report highlights the results of the 2000 NAEP (National Assessment of Educational Progress) fourth-grade reading assessment for the nation. Results in 2000 are compared to previous NAEP reading assessments. The report presents average scale scores, information on students reaching NAEP achievement levels, percentiles and reading performance, student subgroup findings, home and school factors, and information on the NAEP Web site. Major findings are: (1) the reading performance of the nation's fourth graders remained relatively stable across assessment years; (2) significant changes were evident at the upper and lower ends of the performance distribution--higher performing students made progress, and the score at the 10th percentile in 2000 was significantly lower than 1992; (3) in 2000, the percentage of fourth-grade students performing at or above the "basic" level was 63%, and performance at or above the "proficient" level was achieved by 32% of fourth graders; (4) female fourth graders had a higher average score than their male peers; (5) white and Asian/Pacific Islander students outperformed their black, Hispanic, and American Indian peers; (6) students in the Northeast and Central regions outperformed their counterparts in the Southeast and the West; (7) students in central city schools had a lower average score than their peers in urban fringe/large town and rural/small town locations; (8) students eligible for the free/reduced lunch program had a lower average score than students ineligible for that program; (9) students attending public schools had lower average scores than their peers attending nonpublic schools; (10) students who reported reading more pages daily in school and for homework had higher average scores than students reporting reading fewer pages daily; and (11) the average score for the nation was lower in the results that included the performance of students who needed and were provided with testing accommodations. (RS)

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The Nation's Report Card: Fourth-Grade Reading
Highlights 2000.

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Reading Highlights 2000

The Nation's Report Card

National Center for Education Statistics

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National Assessment of Educational Progress

Fourth-Grade Reading Assessment Results Released

Results for the 2000 National Assessment of Educational Progress (NAEP) reading assessment of the nation's fourth-graders are in—and they show a relatively stable pattern in students' average reading scores during the last decade.

An Important Indicator of Educational Progress

Since 1969, NAEP has been the sole, ongoing national indicator of what American students know and can do in major academic subjects.

Over the years, NAEP has measured students' achievement in many subjects, including reading, mathematics, science, writing, history, civics, geography, and the arts. In 2000, NAEP conducted assessments in reading at grade 4 only and in mathematics and science at grades 4, 8, and 12. In addition, NAEP conducted state-by-state assessments in mathematics and science at grades 4 and 8 only.

NAEP is a project of the National Center for Education Statistics (NCES) in the U.S. Department of Education and is overseen by the National Assessment Governing Board (NAGB).

217 (1992) 214 (1994) 217 (1998) 217 (2000)

NOTE: The average scores are based on the NAEP reading scale, which ranges from 0 to 500.
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992–2000 Reading Assessments.

Since 1992, the current NAEP reading assessment has been given in four different years (in 1992, 1994, 1998, and 2000) to a nationally representative sample of fourth-grade students.

Fourth-graders' average reading score in 2000 was similar to the average scores in 1998 and in 1992. In the graph shown above, students in 2000 may appear to be outperforming students in 1994. However, the average score from the 2000 assessment was not significantly different from that in 1994.

U.S. Department of Education
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NCES 2001-513

Achievement Levels Provide Yardstick of Student Performance

Achievement levels provide a context for interpreting students' performance on NAEP. These performance standards, set by NAGB based on recommendations from broadly representative panels of educators and members of the public, determine what should be considered as *Basic*, *Proficient*, and *Advanced* levels of performance in each subject area and grade level assessed.

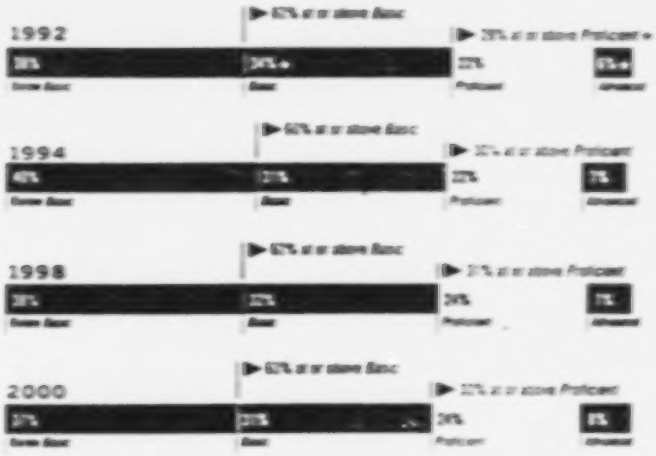
As provided by law, the Commissioner of Education Statistics, upon review of a congressionally mandated evaluation of NAEP, has determined that the achievement levels are to be considered developmental and should be interpreted and used with caution.

However, both the Commissioner and NAGB believe that these performance standards are useful for understanding trends in student achievement. NAEP achievement levels have been widely used by national and state officials, including the National Education Goals Panel.

Some Gains Made by Fourth-Graders in Reaching *Advanced* and *Proficient* Achievement Levels

Between 1992 and 2000, the percentage of fourth-graders at or above the *Proficient* level increased by a small, but statistically significant amount.

The percentage of students at or above *Proficient*—the level identified by NAGB as the goal for all students—increased from 29 percent in 1992 to 32 percent in 2000. The percentage of students who reached *Advanced*—the highest achievement level—increased during the same time period from 6 percent to 8 percent. On total, nearly one-third of fourth-graders in 2000 performed at or above the *Proficient* achievement level, thus demonstrating solid academic performance.



NAEP Reading Achievement Levels: Fourth Grade

Basic Students performing at the *Basic* level should demonstrate an understanding of the overall meaning of what they read. When reading text appropriate for fourth-graders, they should be able to make relatively obvious connections between the text and their own experiences and extend the ideas in the text by making simple inferences.

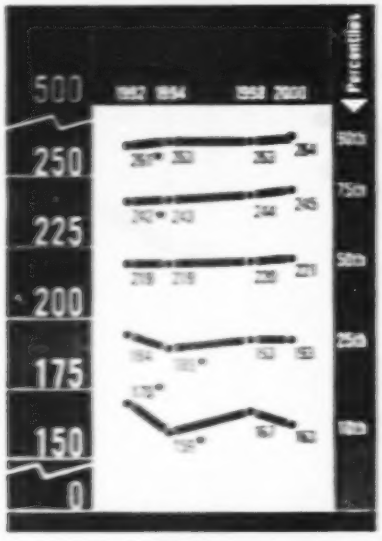
Proficient Students performing at the *Proficient* level should be able to demonstrate an overall understanding of the text, providing inferential as well as literal information. When reading text appropriate to fourth grade, they should be able to extend the ideas in the text by making inferences, drawing conclusions, and making connections to their own experiences. The connection between the text and what the student infers should be clear.

Advanced Students performing at the *Advanced* level should be able to generalize about topics in the reading selection and demonstrate an awareness of how authors compose and use literary devices. When reading text appropriate to fourth grade, they should be able to judge text critically and, in general, give thorough answers that indicate careful thought.

Higher- and Lower-Performing Students Show Different Trends in Reading Performance

Changes at the highest and lowest percentiles of the NAEP reading scale indicate that while the scores for the nation's highest-performing students have improved over time, those of its lowest-performing students have declined. This finding is the result of studying scores at percentiles, or points across the distribution of scores on the NAEP reading scale. Looking at these scores over time indicates whether trends in the national average score are stable across the performance distribution.

While the 2000 national average score of 217 is not significantly different from fourth-graders' average scores in previous assessment years, scores at the percentiles have not remained stable over time. At the high end, the 75th and 95th percentile scores in 2000 have increased in comparison to 1992. Conversely, at the low end, the 10th percentile score in 2000 is lower than it was in 1992.



* Significantly different from 2000.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992–2000 Reading Assessments.

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2000 Assessment Focuses on Fourth-Grade Reading

The 2000 reading assessment was developed according to the NAEP Reading Framework. This framework reflects research that views reading comprehension as a dynamic, interactive process involving the reader, the text, and the context of the reading experience.[1] The framework specifies three reading purposes, two of which—reading for literary experience and reading to gain information—were used in the fourth-grade assessment. It also specifies four types of reading processes or "stances" that characterize the way readers respond to text: initial understanding, developing an interpretation, personal reflection and response, and critical stance. Detailed information about the reading framework can be found in *The Nation's Report Card: Fourth-Grade Reading 2000* and on the National Assessment Governing Board's Web Site at http://www.nagb.org/pubs/92-264/read.html.

The reading passages used in the assessment were taken from the types of books and magazines fourth-graders might encounter in or out of school. These passages are considered "authentic" in that they are neither abridged nor written especially for the assessment. They are reprinted in the test booklets in a format as close as possible to their original publication.

Each student assessed received a booklet containing two reading passages, each with about 10 associated questions. These questions were presented in two formats: multiple-choice and constructed-response. The constructed-response questions were either short questions, requiring a one- or two-sentence answer, or extended, requiring an answer of between one paragraph and a full page.

The design of the 2000 reading assessment allowed for the collection of performance data for special needs students who took the NAEP with accommodations as well as for those students who took the NAEP without accommodations. Special needs students (that is, students identified by their school as having a disability or being limited-English proficient) may have received accommodations. Results that include the performance of special needs students are discussed in detail in *The Nation's Report Card: Fourth-Grade Reading 2000*.

As in the previous assessments, the results reported here do not include students who participated with accommodations. The 2000 reading assessment was administered to a national sample of students. Therefore, state-level data were not collected.

[1] National Reading Panel. (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (pp. 1-1 to 6-96). Washington, DC: National Institute of Child Health & Human Development, National Institutes of Health.

Sample Passage and Questions from the NAEP Reading Assessment

Some of the questions used in the 2000 reading assessment are based on a passage called "A Brick to Cuddle Up To," taken from Cobblestone Magazine. This informational passage describes various ways that the American colonists tried to keep warm during the winter. The author gives details that show the differences between colonial and contemporary life in America. The passage and the types of questions shown here—one multiple-choice, one short constructed-response, and one extended constructed-response question—are typical of those used in the 2000 reading assessment. The tables that accompany these sample questions show two types of percentages: the overall percentage of students who answered successfully and the percentage of students who answered successfully whose average score fell into each of the three achievement levels.

In writing this article, the author mostly made use of

- (A) broad ideas
- (B) specific details
- (C) important questions
- (D) interesting characters

	Percentage correct within achievement level intervals		
Overall percentage correct*	*Basic* 208-237*	*Proficient* 238-267*	*Advanced* 268 and above*
88	72	79	84

* Includes fourth-grade students who were below the Basic level.
**NAEP Reading composite scale range.
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 Reading Assessment.

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Short Constructed-Response Question

Do you think "A Brick to Cuddle Up To" is a good title for this article? Using information from the article, tell why or why not.

	Percentage "Complete" within achievement level intervals		
Overall percentage "Complete"*	Basic 208-237*	Proficient 238-267*	Advanced 268 and above*
37	18	57	78

*NAEP Reading composite scale range.
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 Reading Assessment.

Responses to this question that were scored "Complete" demonstrated an understanding of the way in which the title relates to the central theme by indicating that the passage described methods of keeping warm during winter in colonial times.

Student Sample "Complete" Reponse

Yes I do think it is a good title. It is a good title because the article tells about how colonists kept warm in the winter & how they used heated bricks to keep warmen

Extended Constructed-Response Question

Pretend that you are an early American colonist. Describe at least three activities you might do during a cold winter evening. Be specific. Use details from the article to help you write your description.

	Percentage "Essential or better" within achievement level intervals		
Overall percentage "Essential or better"*	Basic 208-237*	Proficient 238-267*	Advanced 268 and above*
11	1	29	40

*NAEP Reading composite scale range.
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 Reading Assessment.

Responses to this question that were scored "Essential" demonstrated comprehension of colonial life as portrayed in the passage by mentioning three activities, some of which are related to the need to stay warm.

Student Sample "Essential" Reponse

I would sit by the Fireplace and read, or do needlework or stir a kettle or corn pudding, or check the baking bread.

Pretend that you are an early American colonist. Describe at least three activities you might do during a cold winter evening. Be specific. Use details from the article to help you write your description.

Student Sample "Extensive" Reponse

On a cold winter evening I would probly get out a game and play it with my family. We would have a nice hot snack and drink to keep them warm. We would all sit around the fireplace, maybe tell old stories when we were little we could tell ghost stories. When they went to bed I would put the warm bricks under their bed while they were asleep. I would knit a warm blanket for anumb or two.

Responses that were scored "Extensive" demonstrated comprehension of the central theme of the passage. Of the activities described, at least three focus on the need to stay warm.

* Includes fourth-grade students who were below the Basic level.
SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2000 Reading Assessment.

race/ethnicity

Subgroup Data Reveal How Demographic Groups of Fourth-Graders Performed on NAEP

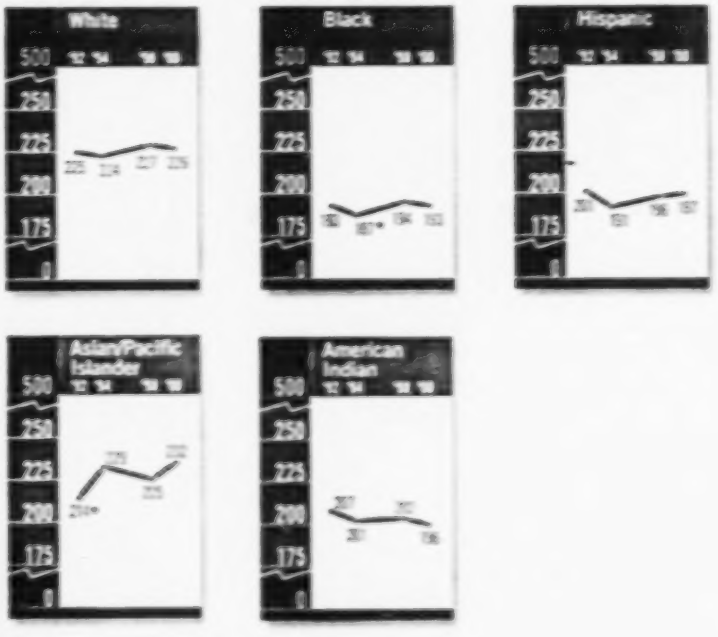
In addition to presenting information about all students' performance, NAEP also looks at the achievements of various subgroups of students. The performance of various racial/ethnic subgroups, of males and females, and of students attending public and nonpublic schools reveals how these young people have performed in comparison to each other in the year 2000 and whether they have progressed over the past decade.

When reading these results, it is important to keep in mind that there is no simple, causal relationship between membership in a subgroup and performance on the NAEP. A complex mix of educational and socioeconomic factors may interact to affect student performance.

Reading Scale Score Performance by Race/Ethnicity

Of the five racial/ethnic subgroups of fourth-graders studied (white, Black, Hispanic, Asian/Pacific Islander, and American Indian children), only one—Asian/Pacific Islander students—had average scale scores that showed overall gains since 1992. However, black students did have an average score in 2000 that was higher than that in 1994. Comparing performance across the subgroups of children shows that white and Asian/Pacific Islander students had higher average scores than their Black, Hispanic, and American Indian peers.

Average fourth-grade reading scale scores by race/ethnicity: 1992-2000



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Trends in scale score gaps between selected racial/ethnic subgroups

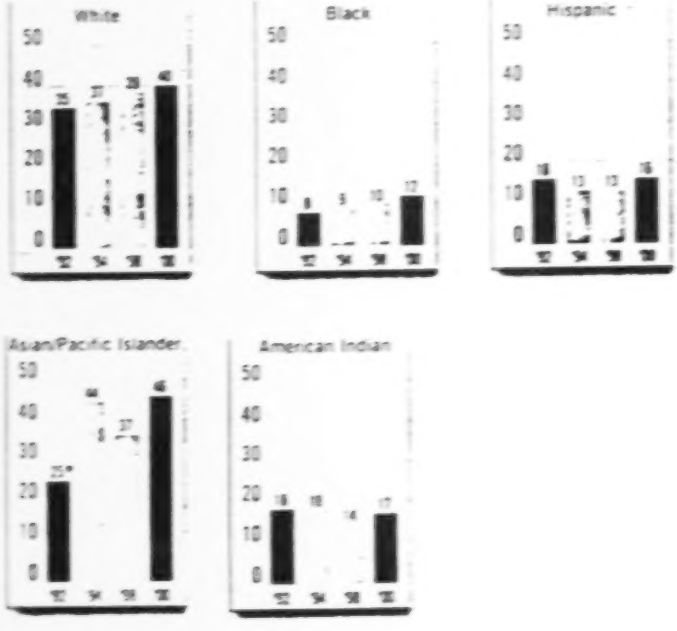
White students have outperformed black and Hispanic students in all four of the NAEP reading assessments since 1992, but is the gap between scores closing? The chart below presents the score gaps between white and black students and between white and Hispanic students. The results indicate that, while there have been slight fluctuations in these gaps, neither has seen a significant change since 1992.

Scale score differences by race/ethnicity: 1992-2000

Reading Achievement by Race/Ethnicity

Results similar to those for scale scores can be seen in the achievement-level performance of the same subgroups of students. In 2000, there was a higher percentage of Asian/Pacific Islander students at or above the *Proficient* achievement level than in 1992. Differences across the assessment years for the other subgroups of students were not statistically significant. Comparing the subgroups indicates that more white and Asian/Pacific Islander students were at or above the *Proficient* level than the other groups studied.

Percentage of fourth-graders at or above the *Proficient* achievement level by race/ethnicity: 1992-2000



* Significantly different from 2000.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992–2000 Reading Assessments.

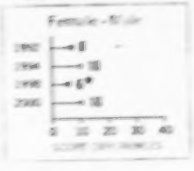
The figures below present reading scale scores for fourth-grade boys and girls across four assessment years: 1992, 1994, 1998, and 2000. Although scores have fluctuated slightly over the assessment years, there have been no significant changes for either boys or girls. However, the results do show that in 2000, as well as in the previous assessment years, girls continued to outperform boys.

Average fourth-grade reading scale scores for male and female students: 1992-2000

Trends in scale score gaps between males and females

The chart below shows the gap between boys' and girls' scores in the four NAEP assessments between 1992 and 2000. The increase that occurred from 1994 to 2000 (from 6 points in 1998 to 10 points in 2000) is statistically significant.

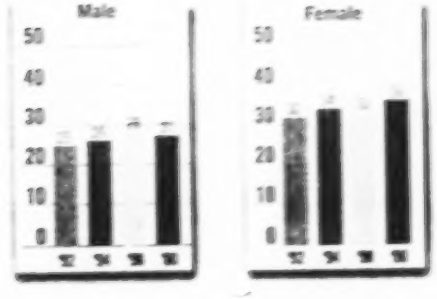
Scale score differences by gender: 1992-2000



Reading Achievement by Gender

The following two figures compare the percentages of fourth-grade boys and girls at or above the *Proficient* achievement level. For boys, fluctuations in percentages at or above *Proficient* are slight and not statistically significant. For girls, the percentage at or above *Proficient* in 2000 (36%) is significantly higher than that in 1992 (32%). In 2000, more girls reached or exceeded the *Proficient* level than boys.

Percentage of fourth-graders at or above the *Proficient* achievement level by gender: 1992-2000



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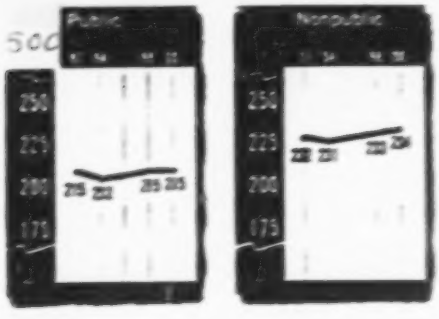
Significantly different from 2000

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992–2000 Reading Assessments.

Reading Scale Score Performance by Type of School

Schools that administer NAEP are classified as being either public or nonpublic. As shown in the figures below, fourth-graders attending nonpublic schools have consistently had higher average scale scores than their public school peers. While this trend continued in 2000, it should be noted that the average scores of students attending either type of school did not differ significantly from any of the previous assessment years shown.

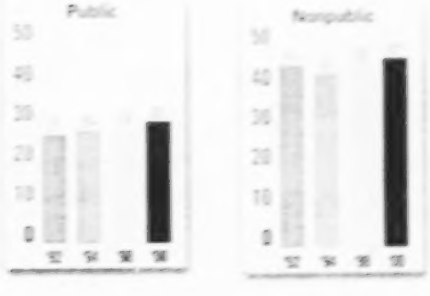
Average fourth-grade reading scale scores by type of school: 1992-2000



Reading Achievement by Type of School

Students' achievement-level performance by type of school mirrors their performance as measured by average scale score: the percentage of students at or above the *Proficient* level was higher for nonpublic school attendees in 2000, as well as in previous assessment years, than for those attending public schools.

Percentage of fourth-graders at or above the *Proficient* achievement level by type of school: 1992-2000



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SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992-2000 Reading Assessments.

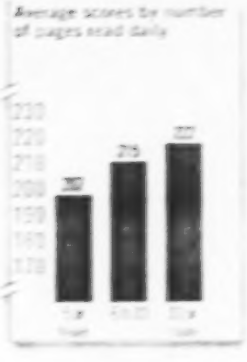
type of school

Home and School Factors Play a Role in Reading Performance

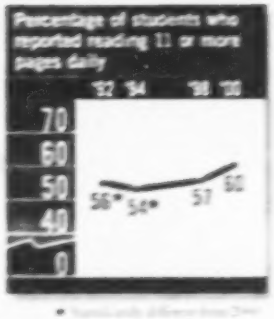
Young people don't learn to read in a vacuum. Activities that take place while a child is either at school or at home may enhance or detract from the development of reading ability. The NAEP 2000 reading assessment focused on fourth-graders' performance in light of their responses to questions about their reading habits at school and in the home. While these findings may suggest a positive or negative relationship between performance on the reading assessment and certain activities, it is important to remember that the relationships are not necessarily causal—there are many diverse factors that play a role in reading ability.

Higher Scores for Those Who Read 11 or More Pages Daily

Results from the 2000 reading assessment suggest a consistent positive relationship between the number of pages read daily in school and for homework and reading performance. Students who reported reading 11 or more pages per day scored higher than students who reported reading fewer pages daily.

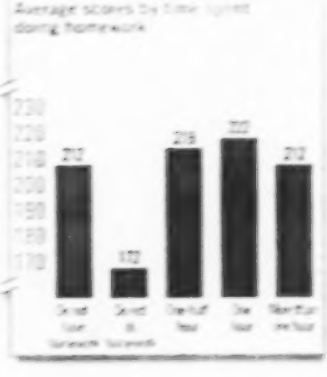


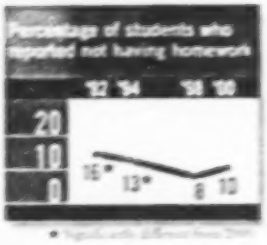
The percentage of students who read 11 or more pages each day is increasing. The line graph on the right shows this percentage for each of the past four NAEP reading assessments. The 2000 percentage is significantly higher than that in either 1992 or 1994. Given that higher scores are associated with reading more pages per day, the fact that more students are reading more pages in 2000 is encouraging news.



Lower Scores for Those Who Don't Do Homework

In 2000, fourth-graders who said they didn't do their homework had a lower average reading score than both those who said they spent various amounts of time on homework each day and those who said they didn't have homework. These findings also suggest that—at least for fourth-graders—the more time spent on homework, the better is not necessarily true. Fourth-graders who reported doing homework for one-half hour to an hour per day outscored their peers who reported doing more than one hour of homework daily.





Findings from the 2000 reading assessment also support that more students have homework now than was the case earlier in the 1990s. As shown in the line graph above, in 2000, a significantly lower percentage of students reported that they do not have homework than in either 1994 or 1992.

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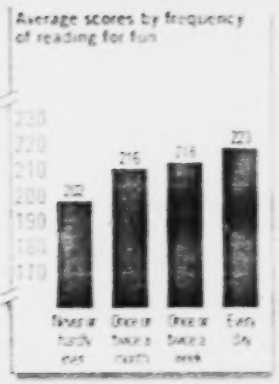
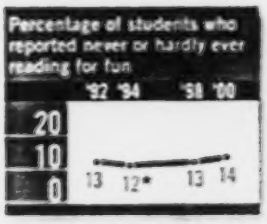
Reading Highlights 2000

Daily Reading for Fun Linked to Higher Scores on NAEP

Just as daily reading in school and for homework plays an important part in a child's developing literacy, so too does frequent reading for fun. In 2000, fourth-graders who reported reading for fun every day achieved the highest average score.



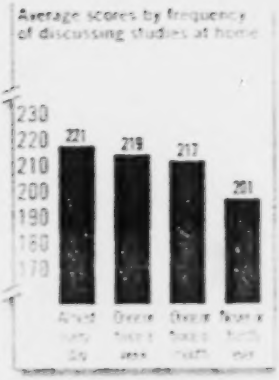
Given that—for fourth-graders—higher average scores are associated with reading for fun frequently, the data on the right present troubling information. The percentage of students who said they never or hardly ever read for fun increased by two percentage points between 1994 and 2000. This may be statistically significant, but it is a small change in an already small proportion.



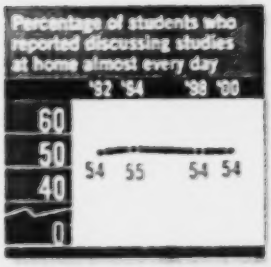
* Signifies scores different from 2000.

Lower Scores for Those Who Never or Hardly Ever Discuss Studies at Home

In 2000, fourth-graders who reported that they never or hardly ever discuss their studies at home had lower scores than their counterparts who said they did so more frequently. These findings underscore the importance of social interactions that provide students with the opportunity to support their developing literacy skills.



The percentage of students who said they discuss their studies at home almost every day has remained stable over the four fourth-grade reading assessments that occurred between 1992 and 2000. As shown in the line graph to the right, there has been very little fluctuation in this percentage since 1992. However, over one-half of fourth-graders in each of the four assessments reported discussing their studies at home almost every day.



SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992–2000 Reading Assessments.

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The Nation's Report Card

Reading Highlights 2000

National Center for Education Statistics

on the Web

http://nces.ed.gov/nationsreportcard

The NAEP Web site offers a wealth of assessment information, publications, and analysis tools including:

- Fast "one-stop" access to free NAEP publications and assessment data
- National and state "report cards" on student achievement in core subject areas such as reading, math, and science
- Sample test questions, student responses, and scoring guides
- Summary data tables and student performance results from past NAEP assessments
- Calendars of current NAEP events, training, and professional development activities
- Technical assistance and online discussions with leading assessment and subject-matter experts

More Information

A detailed report on the NAEP 2000 reading assessment, *The Nation's Report Card: Fourth-Grade Reading 2000*, as well as other NAEP publications, can be ordered from:

U.S. Department of Education
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Additional information about NAEP can be found on the National Assessment Governing Board web site at http://www.nagb.org.

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